I claim:

1. A method of forming an optical device for insertion into the cornea of an eye, said method including the steps of:

   a. forming a polymer film;

   b. forming pores in said polymer film by irradiation; and

   c. widening said pores.

2. The method of claim 1, wherein the step of forming said pores is achieved by irradiation of said polymer film with ions.

3. The method of claim 1, wherein the step of forming said pores is achieved by irradiation of said polymer film with x-rays.

4. The method of claim 1, wherein the step of widening said pores is achieved by the step of etching.

5. The method of claim 1, wherein said step of forming said polymer film includes the step of irradiating said polymer film with a source of radiation to provide surface relief within said polymer film.

6. The method of claim 5, further including the step of providing an adjustable lithography mask to selectively control the radiation incident on said polymer film.

7. The method of claim 6, wherein said step of irradiating said polymer film further includes the step of providing an optical lithography source as the radiation source.

8. The method of claim 7, wherein said step of irradiating with said optical lithography source further includes the step of producing a disc within said polymer film having a first thickness and a surrounding concentric annulus having a second thickness.

9. The method of claim 7, wherein the step of irradiating with said optical lithography source further includes the step of producing structural relief within said polymer film required to correct refractive errors in an eye.

10. The method of claim 6, wherein said step of irradiating said polymer film further includes the step of providing an ion beam lithography source as the radiation source.

11. The method of claim 10, wherein the step of irradiating with said ion beam lithography source further includes the step of producing a disc within said polymer film having a first thickness and a surrounding concentric annulus having a second thickness.

12. The method of claim 10, wherein the step of irradiating with said ion beam lithography further includes the step of producing structural relief within said polymer film required to correct refractive errors in an eye.

13. The method of either claims 8 or 11, further including the step of reducing the transparency of said surrounding annulus.

14. The method of claim 13, wherein said step of reducing transparency is accomplished by the step of forming an opaque layer in said surrounding annulus.

15. The method of claim 14, wherein said step of forming said opaque layer is accomplished by the step of irradiating said surrounding annulus with ions to form a buried graphite layer in said surrounding annulus.

16. The method of claim 13, wherein said step of reducing transparency is accomplished by the step of forming a diffraction grating pattern within said surrounding annulus to reflect pre-selected wavelengths of color while transmitting all other wavelengths.

17. The method of claim 1, further including the step removing excess of said polymer film.

18. An optical device for insertion into the cornea of an eye, said device comprising: a polymer material, said polymer material having a first surface, a second surface, and a perimeter, said polymer material having been irradiated throughout to create a branching network of at least a first set of pores, each of said pores having a diameter, at least a portion of said pores connecting said first and second surfaces, each of said diameters of said first pores being wide enough to allow for the flow of gases and tissue fluid, yet small enough to exclude the ingrowth of ocular tissue.

19. The device of claim 18, wherein said first pores are of irregular shape.

20. The device of claim 19, wherein said first pores are not all of the same diameter.

21. The device of claim 18, wherein said first pores have a surface density of from 200 to 300,000 pores per square millimeter.

22. The device of claim 18, wherein said polymer material is divided into at least first and second zones, said first zone constituting an optical zone, said second zone constituting a skirt portion.

23. The device of claim 22, wherein said first set of pores are in said first zone.

24. The device of claim 23, wherein said second zone has a second set of pores, each of said second pores having a diameter, at least some of said diameters of said second pores being wide enough to permit the ingrowth of ocular tissue.

25. The device of claim 22, wherein said first zone is divided into a central pupil portion and a surrounding iris portion, said central portion being optically clear.

26. The device of claim 25, wherein said iris portion is at least partially opaque.

27. The device of claim 25, wherein said iris portion is at least partially reflective.

28. The device of claim 27, wherein said at least partially reflective iris portion reflects pre-selected wavelengths of color and transmits all other wavelengths.

29. The device of claim 25, wherein said pupil portion has a minimum diameter of 1 mm, said iris portion has an inner diameter at least 1 mm in diameter and an outer diameter of up to 11 mm, and said polymer material is 1-20 microns thick.

30. The device of claim 25, wherein said iris portion is formed by a buried layer of opaque material.

31. The device of claim 18, wherein said first surface of said polymer material is structured in surface relief to change the curvature of a cornea or an eye.